

FAA Center of Excellence for

Alternative Jet Fuels and Energy

Questions and Answers

Updated to include questions received through February 19, 2013

Issued: February 19, 2013

REMINDER: Letters of Intent to submit a proposal are due tomorrow, February 20. See below.

New Questions	February 19, 2013
Q. May a university rank order or weigh individual projects that	are being proposed?
A: Criterion 6 is equally weighted during the evaluation process veselection criteria provided by Congress. However, within Criterio may present research topics in a rank order or weigh projects related determined by the team.	on 6, the COE team ive to importance
Q. The current grants.gov application package provides two differ (RR FedNonFed Budget and a Research and Related Budget file). want completed?	
A: The University should complete in full the Federal Budget esti also account for nonfederal amounts on the R&R form provided in narrative. It is important to keep in mind that we understand that the is intended to show the evaluation team and the Administrator that available resources necessary to serve the FAA and is able to gene contributions at the \$4M base annual level of effort. A new budgethe team members are selected and the actual projects are identified	Grants.gov or in the nis application process a team has the rate matching et will be defined once d.
Q. What budget is requested in Volume II (4) Research and Relate be the operating budget for the center and its administration only? some level of research funding and prepare a combined center ope budget?	ed Budget? Should this Or, should we assume
A: The budget should reflect all anticipated activities, including o administration, at the \$4M level of effort.	perations and

- Q. Under certain circumstances, the FAA will consider granting a waiver from the 50:50 match requirement and allow a 75:25 match. Should this request for relief be made during the proposal phase now, or is that done after a team is selected, and when new funding proposals for specific targeted projects are made after the COE is established?
- **A:** The team should prepare the proposal based on the assumption that all grant funds awarded to *establish*, *operate and conduct research* will be subject to the dollar-fordollar matching requirement. Requests for consideration of a waiver will be accepted and considered by the FAA Acquisition Executive on a case by case basis after the Administrator selects the COE team and specific proposals are submitted, evaluated, and funded.

Q. "Each university team preparing to submit a proposal in response to this Final Solicitation must submit a <u>Letter of Intent</u> to <u>Patricia.Watts@faa.gov</u>. This letter must list members and affiliates joining the team and be submitted by the university proposing to serve as the COE lead by noon on Wednesday, February 20, 2013."

What is intended regarding *affiliates*? Does this refer to the industry and other partners that would serve as advisors and potential research partners? Or, does it refer to team members who may receive sub-awards from the core universities to support specific research? Once submitted, can this list be altered in the final proposal?

A: By February 20, the Letter of Intent sent to the COE Program Office by the Lead University team member should identify (a listing and/or an organization chart) all those who are expected to support the COE in any way. COE affiliates could be universities that may be considered as part of the team (but may not be involved to the same extent as 'core' members), industry advisors and potential research partners, those willing to provide matching contributions of any kind, national laboratories, or an entity identified at this time and having expressed an interest in working with the COE in this particular topic area - for any reason. Individual letters of support are not expected to accompany the Letter of Intent to submit a proposal, and the list may be altered in the final proposal.

- Q. We are working on <u>letters of support</u> from our industry partners, but will probably not have all those support letters in place by the letter of intent due date of Feb. 20. If the FAA requires a list of the industry partners by Feb. 20, can additional partners be included in the final proposal submittal?
- **A:** Proposals in response to the Final Solicitation are due on March 20 and <u>individual</u> <u>letters of support</u> from industry, other entities or affiliates are due at that time and should be included with the completed package submitted by the Lead University. A proposed list (only) of university members and other affiliates is required on February 20.

Q. The specified forms require detailed budget information, but could you please clarify what scope of work is to be budgeted?
A: Applicants may prepare the initial 2 - 3 year budget in general terms as actual projects will not be defined until after the team is selected. The FAA is interested in your hypothetical approach to the topic areas, how you intend to manage the COE, the team, the costs related to necessary activities, the costs for the team to travel (4 meetings required year one and 2 meetings each year thereafter), etc.
Q. Is the budget in the proposal for the operations of the COE only?
A: The budget should include costs to administer and operate the COE as well as amounts expected to be applied to support research activities in each topic area.
Q. Are budgets required for the proposed projects specified in Criterion 6?
A: Budgets are to include estimates of the costs to conduct research and related activities in each topic area.
Q. Given that the proposed projects may or may not be selected by the FAA after selection of the COE team, it is difficult for potential cost-share partners to commit funding. What are the expectations in showing matching funds and cost-share?
A: The COE team members are expected to show letters of support from individuals representing various nonfederal entities and the extent to which they expect to be involved in COE activities. The FAA would like an indication of the organizations that will be making contributions to the universities in the different topic areas, and the proposal should indicate how the academic and industry team members expect to work together in support of the COE. We would not expect to see exact dollar amounts, although if organizations make such commitments, these may be included.

Q. Would an email on office stationary be sufficient as a letter of intent from an appropriate university official?
A: An emailed letter on office stationary will suffice as an official letter of intent in response to the solicitation for the COE for AJF&E.
Q. There is a language on p. 24 of 25 of the solicitation, reading as follows:
REQUIRED FORMS The attached forms are required when submitting grant proposals. o Standard Form 424, Application for Federal Assistance o Research and Related Budget o Research and Related Personnel Data o Research and Related Senior/Key Person Profile (Expanded) o Research and Related Fed/NonFed Budget o Project/Performance Site Locations o Other Attachments"
Please provide a link where these forms can be found as this is a complex proposal with multiple team members. We would like to forward these forms to all the team members ahead of time.
A: The requested forms are available for downloads in grants.gov under funding opportunity number 13-C-AJFE-Solicitation.
Q. The grants.gov file requires an R&R budget and I am assuming this is for the lead institution. Should this include our administrative budget, anticipated research budget coming to us, or the total anticipated funds for the entire consortium?
A: The FAA is making an annual COE base funding commitment of \$4M via the grant instrument. All grant funds awarded to <i>establish</i> , <i>operate and conduct related research</i> are subject to the matching requirement. Therefore, this COE can expect to operate at the \$8M level of effort, pending the availability of R&D funds. The proposal and budget, whether using a form or supplemental narrative, should address all COE related activities anticipated within the initial 2 - 3 years.

Q. Within the R&R budget, the file appears to combine both the federal and nonfederal together and does not distinguish between the two. Is this the intent?
A: The universities should identify the expected sources of the match and the amounts or types of matching contributions the team members are generating. The proposal should define how the team would expect to use the federal funds and may distinguish between the use of federal funds awarded and those of the nonfederal contributions. Please note that although encouraged, matching is not necessarily required on a task-bytask basis due to the long-term nature of our COE relationship and the interest expressed by nonfederal sources in any one project.
Q. In terms of the nonfederal portion of the funding that we will expect to generate, could the universities provide an estimate of the anticipated categories for matching dollars rather than address specific topic areas?
A: Yes, estimates are sufficient.
Q: Would the corporate entities identified in the proposal be part of the winning team and considered as a participating affiliate, or might nonfederal organizations send letters of support for the new COE for AJF&E and participate regardless of which team is selected?
A: Industry is able to do both. Industry or any nonfederal entity may align with any one team or more than one team, and may also send a letter to the COE Program Office indicating interest in supporting the new COE - regardless of the team selected.
Q: There is not much emphasis on sound measurement within the solicitation, but
measurements are needed for analytical validation. Is there a reason for not including sound measurements within the solicitation?
A: Even though it is not explicitly stated, measurement, modeling and analysis of aircraft noise are all integral to several of the technical areas of research within the solicitation. The new COE could conduct aircraft noise measurements, modeling and analysis that would complement related work that is funded by NASA and others. Such research would augment our current understanding of aircraft noise impacts and our capabilities in developing metrics, thresholds and policies.

Q: Can a non-university, such as from a federal research laboratory, serve as a member of a COE leadership team (not PI).
A: A federal research lab may conduct research within a COE relationship; however, the FAA would establish the COE cooperative agreements only with university members. Therefore, the role of the lab would be determined at the time the actual projects are defined.
Q: Can we submit suggestions that would significantly impact the Draft Solicitation and when?
A: Yes, the period public comment closes on January 10, 2013.
Q: The draft solicitation focuses on alternative jet fuel. Will alternative energy in other format that can be beneficial to air transportation be considered as within the scope of the COE?
A: As noted in the name of the new COE, the research focus will be on alternative jet fuels and environment. We intend to use this COE to aid in the development and deployment of drop-in replacements to conventional, petroleum-derived jet fuels. We are also interested in technical solutions that could mitigate the environmental impacts of aircraft operations, including engine-less taxi operations.
Q. Is one COE expected to cover all technical areas, 3.1.1 – 3.1.10?
A: The FAA would expect that university team members and affiliates would be prepared to perform research in the areas indicated in the Final Solicitation.
Q. Can a COE team sub-award to other universities not represented in the original proposal?
A: Over the life of the COE, should additional requirements surface, new members might be invited to conduct joint activities with the core COE universities. Such universities may receive funding via a sub-award from the core member or they may be added to the team as a member.

Q. How might the technical areas be prioritized by the FAA?
A: The selection criteria provided by Congress are considered to be equal. Criterion #6, which refers to the projects proposed, will be evaluated based on the proposed approach to the research topics. Once the team is selected, actual proposals will be submitted for research in support of specific topic areas.
Q. How will "alternative jet fuels" and "alternative feedstocks" be defined? A: Alternative jet fuels are hydrocarbon-based, drop-in fuels that are derived from non-petroleum sources. Alternative feedstock is raw material required for the production of an alternative jet fuel.
Q. The term "region" is used. How is "region" being defined and is the entire team anticipated to reside/operate within the region? A: The 'region' would include the geographic areas surrounding each member university. This criterion would include various AJF&E related facilities, resources, etc., that would benefit from or would have significant involvement in the COE. Congressional intent is clearly that a COE relationship would be an asset not only to the FAA, but to the aviation community reflected by members and affiliates in various geographic regions throughout the U.S.
 Q. Is it possible for more than one COE to be awarded, each focusing on a subset of the technical areas? A: The FAA expects one team to be selected, and anticipates that the universities would partner with members and affiliates having capabilities and resources in each of the defined technical areas.

Q. Can you confirm that the solicitation will be open to non-US companies?
A: Although the FAA has authority that is limited to awards to universities, other private and public organizations have worked with us through the COE business model and can provide matching contributions or services as needed. Non-US companies have participated in COE research and other activities in the past and we expect this practice to continue in the future.
Q. Can a National Lab participate as a COE member or affiliate?
A: Although the FAA has the authority to award grants to universities, the university members may work with others as appropriate to support FAA research and other activities. Public and private organizations are encouraged to provide matching contributions or work with the FAA and the COE on topics of mutual interest.
Q. Would industry have to be part of the winning team to be considered as a participating affiliate or might nonfederal organizations send letters of support for the new COE for AJF&E and participate regardless of which team is selected?
A: Industry is able to do both. You may align with any one or more than one team, and send a letter to the COE Program Office indicating your interest in supporting the new COE, regardless of the team selected.
Q. Please explain involvement of international universities. How does research from international universities feed into COE program?
A: As appropriate, international universities may collaborate, coordinate, or conduct COE related research. As in the past, however, the relationship would be defined and solidified through a U.S. university member.
Q. When a graduate student supports a COE effort, does the university also fund the student? Can you please explain graduate student stipend?
A: Graduate students very often conduct COE research under the guidance of senior faculty. Whether through a salary or a stipend, the university would generally fund the student, as it would the faculty member, at a rate that is approved by the university.

- **Q.** Some technical areas identified in the solicitation overlap with existing COEs. Some technical areas also overlap with efforts conducted under other government agencies. How would overlap in technical areas addressed?
- **A:** COEs have coordinated areas of mutual interest in the past by working together on various aspects of specific projects. The sponsoring organization for the task(s) would generally guide the collaborative process. When other government agencies fund a project, they are able to provide a technical monitor to assure that activities are coordinated, there is no duplication of effort, and that the various activities are complimentary.

- Q. Rather than a 1:1 match, under what circumstances can a COE university or team expect to be approved for the 75-25 matching obligation?
- **A:** Such requests are considered on an individual basis with consideration of the specific circumstances surrounding each project; however, the process to request consideration for such relief is the same: When the university is proposing to conduct a project that generates little or no interest from an nonfederal source in supporting the specific task(s) by way of matching contributions, the PI would discuss the matter with the FAA COE Program Manager and prepare a request for consideration of relief from the 1:1 requirement. The FAA COE Program Manager, if in agreement with the justification and the request, would forward the necessary 'form' to the university PI for completion. The PI would submit the form to the COE PM for concurrence. The COE PM would sign and send the formal request to the COE Program Director for further consideration. With 2nd level approval, the request would then be forwarded to the FAA Sr. Acquisition Executive at FAA Headquarters for final consideration.

- Q. At the stakeholder's meeting it was mentioned that geographic diversity is desirable or required in the COE program. Does this mean that geographic diversity is an evaluation criterion that will be used in the selection of the new center team?
- **A:** As was discussed in our meeting, there are six selection criteria clearly presented by Congress in Public Law 101-508 and each of these are equally weighted. However, within the body of legislation, it is also stated:
- (1) General Authority The administrator may make grants to one or more colleges or universities to establish and operate several regional centers of air transportation excellence, whose locations shall be geographically equitable.
- (7) **Allocation of Funds** Funds made available to carry out this subsection shall be allocated by the Administrator in a geographically equitable manner.

Therefore, the FAA Administrator must also consider the teams that enable him to comply with the additional Congressional guidance provided in the COE enabling legislation.

- Q. Describe how industry participates in the Centers?
- **A:** Industry affiliates can participate in COEs in various ways. Industry affiliates can serve as members of the Advisory Boards, provide matching contributions in various ways, or receive sub-awards for specific tasks. If industry participants are interested in working with the team that is selected for the new COE for AJF&E, they can send Pat Watts a letter stating their capabilities and willingness to join the core universities. Industry participants are also free to contact a proposing team and individual universities and discuss possibilities directly with each of them.

Questions presented at the COE Public Meeting conducted on November $15^{\rm th}$ & $16^{\rm th}$ 2012

- Q. Do you anticipate working with NASA on altitude emissions projects?
- **A:** NASA is one of FAA's primary collaborators regarding aircraft emissions measurement research. We anticipate continuing our collaboration with NASA on emissions research, including measurements, and in the future this would include emissions measurements at altitude.

Q. What is private sector's involvement in COE program? How does FAA distinguish work that would go to COE vs. contract vehicles?
A: The private sector participates within the PARTNER COE via an advisory board (that advises the PARTNER Director). We derive much value from the input this body provides to PARTNER. We hope that we can continue to get similar information from industry participation within the new COE. We distribute work to the COE and contractors as we deem appropriate.
Q. Is trailing edge vortex mitigation reduction and reducing separation time in flight a research topic area for the new COE?
A: This has not been something FAA has pursued and we do not see it as a priority as benefits are not clear.
Q. What are the plans for the PARTNER COE? Please explain the relationship between the existing COE for Partner and new COE. What is vision of the transition to the new COE from the existing COE for Partner?
A: The PARTNER COE is currently set to reach its ten-year mark in September 2013. We are seeking a short-term extension of PARTNER to ensure an orderly transition of research from the PARTNER COE to the new COE.
Q. What is the difference between the existing technical areas within the COE solicitation and the work being conducted by the PARTNER COE? Which ones are overlaps?
A: There are areas of overlap between the existing and new COE in the technical areas covering environment and the economic and environmental sustainability of alternative fuels. The existing COE does not conduct research in other areas relating to alternative jet fuels.

Q. In the ten technical areas, is there an area that is more important than the others? Are all ten technical areas equally weighted?
A: The ten technical areas are equally important. As reflected in the name, COE for Alternative Jet Fuels and Environment, half of the technical areas are related to alternative jet fuels and half are on areas related to environment.
Q. In the five pillar environmental approach, what is the priority of pillar five?
A: The new COE will need to conduct work on all five of the NextGen environmental pillars. The new COE will be instrumental in providing information that aids FAA in developing aviation and environmental policy, which is Pillar 5, so this will indeed be a priority. Prioritization within this pillar evolves as needs evolve.
Q. Please explain vision of synergy for alternative fuel and environment technical areas?
A: As the two topics are highly inter-related, we are looking for teams that can work together.
Q. In regards to algae bio fuel, will the new COE include genetic engineering as a topic area?
A: No. We are looking to complement the work that is ongoing at DOE and USDA and genetic engineering clearly falls into the work that they are funding.
What will be the process to prioritize research topics? Will stakeholders be involved?
Q. What will be the process to prioritize research topics? Will stakeholders be involved? A: We anticipate stakeholder involvement to identify key areas of concern for the aviation industry and to use this information to identify potential areas of research for the COE.

Q. Please explain life cycle assessment, fuel logistics, and regional feedstock solutions in the context of new COE program.
A: The new COE program will use life cycle assessment to evaluate the greenhouse gas emissions from the use of alternative jet fuels. In order to support regional alternative jet fuel supply development the COE may conduct analyses of fuel logistics, feedstock solutions and other studies.
Q. Please define alternative, renewable, and sustainable in the context of alt fuels for the new COE program. Is there a greenhouse gas threshold that would need to be met for an alternative fuel to be considered for funding within the new COE program?
A: When we refer to alternative jet fuels we mean hydrocarbon-based, drop-in fuels that are derived from non-petroleum sources. FAA is agnostic as to feedstock and alternative fuel conversion process, but we are seeking alternative jet fuels that offer benefits over petroleum jet fuels from a GHG and Air quality perspective. These benefits would need to be confirmable via appropriate quantification of life-cycle GHG emissions, emissions that degrade air quality, and sustainability analysis that consider factors such as water use, land use and economic impact on rural communities. Many of these fuels are expected to be renewable or incorporate renewable (e.g. biomass) feedstocks.
Q. What is the baseline for sustainability in the context of the new COE?
A: The baseline for comparison for economic and environmental sustainability is conventional jet fuel refined from petroleum feedstocks.
Q. In order to conduct fuel testing, a university could need access to expensive equipment. What would be the opportunity for universities to access equipment and engines? Is there any potential to access equipment or engines from the US Air Force or other?
A: We work very closely with the Air Force Research Laboratory, NASA, engine OEMs, and other entities that have equipment and engines. While there is a possibility to work with these groups within the context of the new COE, it is the responsibility of each proposing university team to coordinate access and use of such equipment and facilities, if it is required to perform the research proposed.

with fuel testing (performance, durability) to support fuel qualification? A: Historically, the only way to validate a proposed fuel has been to characterize the fuel properties relative to petroleum-derived fuel and then run an extensive and expensive series of developmental rigs and engines tests. Pilot-plant quantities of the fuel are required for these rig and engine tests. In order to change from this laborious, expensive, and uncertain process, tests and testing procedures are required that can clearly identify if a proposed fuel chemistry is acceptable or not and can do so in a reasonable time frame and cost with limited quantities of fuel. COE work could support efforts to define tests that identify either allowable chemical compositions or proof tests that can be performed quickly with limited quantities of fuel. **Q.** What is the goal of combing technical areas relating to alternative fuels and environment? How are those two technical areas related? A: The areas are linked because alternative fuels are one of the three key technological areas that will help us reach our energy goals as well as our environmental goals in terms of climate change and air quality. We are looking for a team with a wide range of capabilities who can evaluate these environmental interdependencies as well as those that relate to the other key technological areas of aircraft and their operation. O. Please elaborate on FAA's funding level. How much will be the FAA interest in funding alternative fuel technical area? A: The relative funding that will be devoted to the technical areas will vary depending on FAA's needs. We intend to support this COE at a minimum \$4 million base level annual funding, pending congressional appropriations. **Q.** What tools and mechanism can the COE program office use to attract funding? A: The university and industry participants within the COE will have the opportunity to provide the FAA, and other funding agencies that participate in the new COE, with potential areas of research.

Q. Could you please explain what you have in mind to do to reduce the costs associated

Q. Some COEs refer to their industry participants as affiliates, but PARTNER refers to theirs as an advisory board. What is the role of industry in the new COE?
A: Each COE center uses variation of terminology. The industry participants in the PARTNER COE form an Advisory Board that provides advice to the PARTNER COE Director. The PARTNER Advisory Board does not advise the FAA, but the advice that is given to the PARTNER COE Director is shared with the FAA.
Q. Does the structure for the new COE need to be the same as that of PARTNER?
A: The structure of the COE is at the university team's discretion. We want to minimize overhead from the COE program office such that we have more funding to conduct research.
Q. Would the COE advisory board determine the research priority for projects?
A: This varies by COE. We will seek input from the COE members on an annual basis for potential areas of research.
Q. Please explain evaluation criterion #1 from the solicitation. (A) The extent to which the <u>needs of the State</u> in which the applicant is located are representative of the needs of the region for improved air transportation services and facilities.
A: To address needs of the State and region for improved services and facilities would require the applicant to describe the current facilities, services, and other resources currently available to support and commit to a strong COE relationship with the FAA. The university might also anticipate how the COE might utilize the current resources and serve to enhance or expand the State and regional capabilities in the topic area.
Q. Please explain evaluation criterion #6 from the solicitation. How does FAA determine what research efforts are a priority for a COE? (F) The projects which the applicant proposes to carry out under the grant.
A: Within each research phase, the FAA determines research priorities based on the sponsoring organizations' mission, goals, fiscal plans and available funding.

Q. Does advisory board determine priority on research topics?
A: The COE advisory board may have the opportunity to review and comment on the various research topics proposed and completed; however, the sponsoring organization for each project generally establishes initial research requirements. When the COE is established, the members will determine who serves on the board and how the board will interact with the COE.
Q. A five-year evaluation is a long period of time to conduct effective course correction. How would feedback and input be provided in the interim?
A: Within a three-year COE phase, a standard evaluation would take place during the second year. However, we anticipate that this COE will be established with a five-year agreement. This timing would lend itself to an evaluation after the completion of the first year and again during the 4 th year of operation.
Q. Under evaluation criterion #5 for continuing education, what qualifies as continuing education? Would a short course be considered continuing education? (E) The demonstrated ability of the applicant to disseminate results of air transportation research and educational programs through a statewide or regionwide continuing education program.
A: Yes.
Q. Are all evaluation criteria in the solicitation of the same importance?
A: All criteria are treated equally.
Q. Is geographic equity considered on the center level as represented by all proposed university members?
A: Yes

Q. Would this a multiple award?
A: The FAAs intention is to select one team but each member is funded separately.
Q. Please explain the role of non-academic affiliates on the COE team.
A: Although only university members are able to submit proposals, industry affiliates and other private entities may serve on the advisory board, provide matching contributions, receive sub-awards to conduct research, host meetings, provide for student work assignments, support assignments at various locations, etc. The specific role of affiliates and other private and public entities would be clearly defined by the selected team and further expanded as the COE develops.
Q. Please explain the role of the university team. How are specific tasks awarded once the new center is established?
A: Once the COE team has been selected, the COE program office negotiates and executes a cooperative agreement with each core university member, and introductory meetings are conducted with the various sponsoring organizations. As a result of these initial discussions, the universities submit proposals to the federal government for specific topics at a specific funding level. The proposals are evaluated and funded as amendments to the cooperative agreements.
Q. Can one university be on multiple proposals?
A: Yes.
Q. Can industry be exclusive to their commitment to one team or may they support any team selected?
A: They may do both or either, exclusively commit to one team by way of a letter to the lead university which would be included in their proposal package, or provide a letter of support to the COE program office in support of any team selected.

Q. Does a COE make itself available on to the FAA sponsor or can it provide research support other FAA organizations and others outside the FAA?
A: Once the COE is established, the FAA expects these resources to be available to other organizations within the FAA and outside the FAA as well. Such an expansion of COE services to others would enable the COE to become a 'national resource' and lead to self-sufficiency within 10 years, as anticipated by the agency.
Q. Is there a limit to the numbers of school in one COE?
A: No, there is no limit.

- Q. Please explain the role of administrative lead.
- **A:** One COE member takes responsibility as the Administrative Lead and coordinates all administrative matters with members and affiliates.
 - Prior to selection as a COE and during the solicitation phase, the consortium of
 universities and other institutions of higher learning identify either a single or
 joint institution(s) which will act as the lead for the COE.
 - The FAA does not recognize any one university or institution of higher learning as the "Primary" partner within the COE because the FAA intends to have a direct relationship with all core members of the COE and participate in substantial interaction and involvement directly with all COE researchers.
 - Universities may choose to rotate leadership within a COE with one of the members from the group serving as the lead institution for administrative or technical purposes for a period of time. Such responsibilities may change or remain with one institution throughout the life of a COE.
 - The Administrative Lead would compile member information and serve to conduct various activities, such as:
 - **Information Dissemination.** Dissemination of relevant COE information and progress of the affiliated group, to the FAA and to the aviation community nationally and internationally as appropriate.
 - **Report Submission.** Using a standardized management information system, track, prepare and submit quarterly, semiannual and annual reports, financial statements and other information as required by the COE Program Manager or COE Program Office, etc.
 - **Annual Review and Meetings.** Coordinate and schedule various meetings as needed with the COE Program Director and COE Program Manager.
 - Oversight. Assure that research teams are coordinated as needed, activities are not duplicated, matching plans and reports are reasonable, prudent, and submitted as needed, and all COE members are fully involved in COE activities.
 - **Identification of Points of Contact**. Assuring that primary points-of-contact (POCs) are identified at each member institution and affiliate, and assure that POC contact lists are updated on a regular basis and reported to the COE Program Director.
 - **Track Student Placement**. Assuring that the COE Program Office receives reports regarding the placement of all students as they complete their studies and enter the work place.